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(71) Applicant: Bristol-Myers Squibb Company  
345 Park Avenue  
New York, N.Y. 10154(US)  
Applicant: TRUSTEES OF DARTMOUTH  
COLLEGE  
P.O. Box 7  
Main Street  
Hanover, NH 03755(US)  
Applicant: THE GENERAL HOSPITAL  
CORPORATION

55 Fruit Street  
Boston, MA 02114(US)

(72) Inventor: Aruffo, Alejandro A.  
1012 Spruce Street  
Edmonds, WA 98020(US)  
Inventor: Ledbetter, Jeffrey A.  
306 N.W. 113th Place  
Seattle, WA 98177(US)  
Inventor: Noell, Randolph  
Freeman Hill Road  
Plainfield, NH 03781(US)  
Inventor: Stamenkovic, Ivan  
59 Babcock Street  
Brookline, MA 02146(US)

(74) Representative: Kinzebach, Werner, Dr. et al  
Patentanwälte  
Reitstötter, Kinzebach und Partner  
Sternwartstrasse 4  
Postfach 86 06 49  
D-81633 München (DE)

(54) The CD40CR receptor and ligands therefor.

(57) The present invention relates to a counter-receptor, termed CD40CR, for the CD40 B-cell antigen, and to soluble ligands for this receptor, including fusion molecules comprising at least a portion of CD40 protein. It is based, at least in part, on the discovery that a soluble CD40/immunoglobulin fusion protein was able to inhibit helper T-cell mediated B-cell activation by binding to a novel 39 kD protein receptor on helper T-cell membranes. The present invention provides for a substantially purified CD40CR receptor; for soluble ligands of CD40CR, including antibodies as well as fusion molecules comprising at least a portion of CD40 protein; and for methods of controlling B-cell activation which may be especially useful in the treatment of allergy or autoimmune disease.

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## EUROPEAN SEARCH REPORT

Application Number  
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 5)
A	TISSUE ANTIGENS vol. 36, no. 1, July 1990, COPENHAGEN, DENMARK pages 33 - 36 E. CLARK 'CD40, a cytokine receptor in search for a ligand.' * the whole document *	1-4	C07K15/00 C12P21/08 A61K37/02 A61K39/395
P, X	IMMUNOLOGY TODAY vol. 13, no. 11, November 1992, AMSTERDAM, THE NETHERLANDS pages 431 - 433 R. NOELLE ET AL. 'CD40 and its ligand, an essential ligand-receptor pair for thymus-dependent B-cell activation.' * the whole document *	1-23	
P, X	NATURE vol. 357, no. 6373, 7 May 1992, LONDON, GREAT BRITAIN pages 80 - 82 R. ARMITAGE ET AL. 'Molecular and biological characterization of a murine ligand for CD40.' * the whole document *	1-3, 5-10, 14-17	TECHNICAL FIELDS SEARCHED (Int. Cl. 5)  C07K C12P A61K
P, X	EUROPEAN JOURNAL OF IMMUNOLOGY vol. 22, no. 10, October 1992, WEINHEIM, GERMANY pages 2573 - 2578 P. LANE ET AL. 'Activated human T cells express a ligand for the human B cell-associated antigen CD40 which participates in T cell-dependent activation of B lymphocytes.' * the whole document *	1-3, 5-10, 14-17	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 21 March 1994	Examiner Nooij, F
<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons A : member of the same patent family, corresponding document			



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